

ABSTRACT OF THE INVENTION

Disclosed is a biological anti-tumor approach that delivers specific antigen stimulation in the presence of co-stimulatory signals to the immune system. Tumor cells are engineered such that processed antigens and co-stimulatory molecules are incorporated into virus-like particles capable of modulating immune responses without cellular entry and nucleic acid genomic host cell integration. The invention describes constructing antigen presenting particles that will themselves present tumor antigens in an immunogenic fashion to therapeutically activate anti-tumor immunity within a mammalian host.